



GSAT-6A

GSLV-F08/GSAT-6A



THE MISSION

12th flight of Geosynchronous Satellite Launch Vehicle (GSLV)

Sixth flight with Indigenous Cryogenic Upper Stage

Launch from the Second Launch Pad (SLP) at Satish Dhawan Space Centre SHAR, Sriharikota

Targeted Geosynchronous Transfer Orbit (GTO) of GSLV-F08

Perigee : 170 km
Apogee : 35,975 km
Inclination : 20.63 deg
Azimuth : 106 deg



Three
Orbit Raising Manoeuvres
using the satellite's
onboard propulsion system
 ΔV : 1656 metre/sec



Targeted Orbit of GSAT-6A

Type : Geostationary Orbit
Height : 36,000 km
Inclination : Zero deg
Longitude : 83 deg East

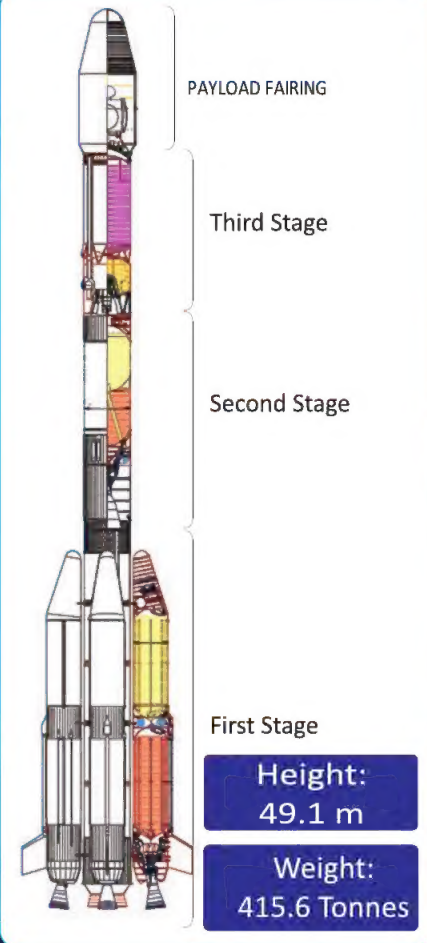
THE VEHICLE

GSLV-F08 at a Glance

Parameters	Stages			
	First Stage (GS1)		Second Stage (GS2)	Third Stage (GS3)
	Strap-Ons	Core Stage		
	(4 L40 H)	(S139)		
Length (m)	19.74	21.25	11.57	8.47
Diameter (m)	2.1	2.8	2.8	2.8
Propellants	Earth Storable Liquid Propellants	Composite Solid Propellant	Earth Storable Liquid Propellants	Cryogenic Propellants
Propellant mass (T)	4 x 42.7	138.11	39.48	12.84
Max. Vacuum Thrust (kN)	4 x 759.4	4846.9	846.8	73.55

Improvements in GSLV-F08

- ▶ Induction of High Thrust Vikas Engine (HTVE) in GS2
- ▶ Induction of electromechanical actuation (EMA) system in place of electro-hydraulic actuation (EHA) system in GS2



THE SATELLITE

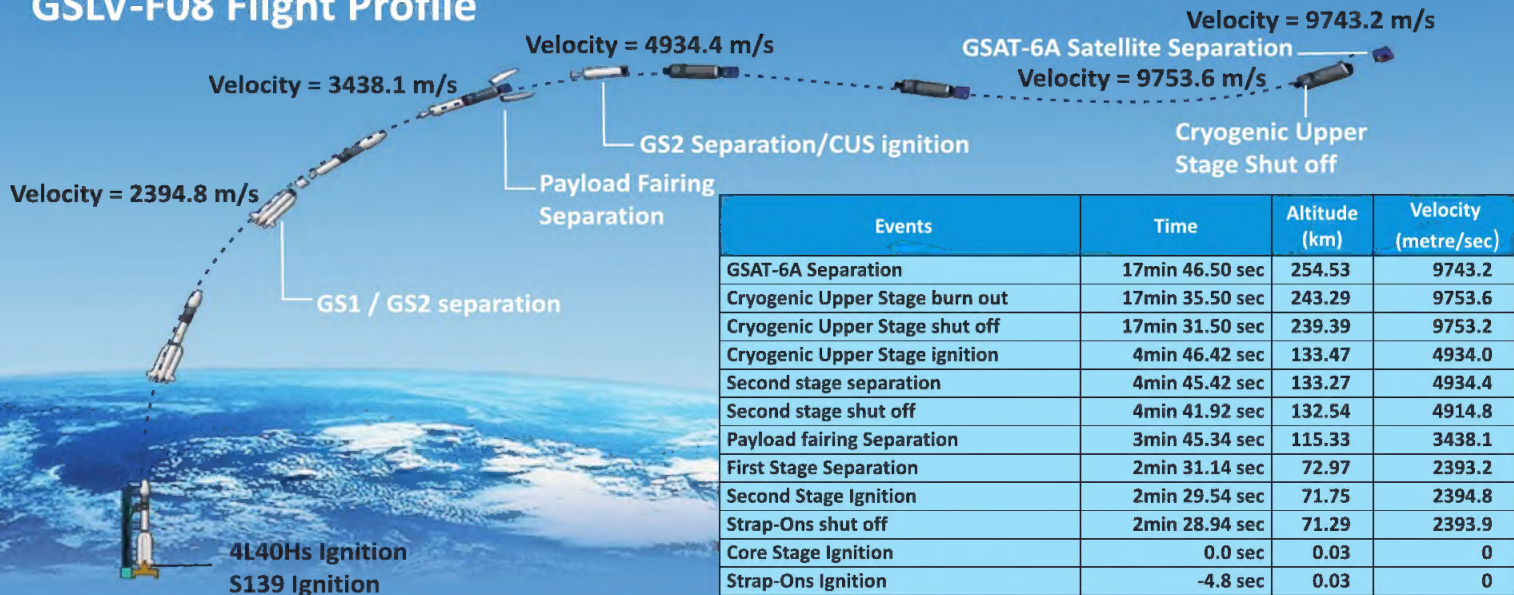


GSAT-6A

Salient Features

- ▶ Provides mobile communication for India through multi beam coverage facility
 - ▶ S-band in five spot beams
 - ▶ C-band in one beam
- ▶ 6m diameter Unfurlable Antenna for user communication link
- ▶ 0.8 m Fixed Antenna for hub communication link
- ▶ Overall size : 1.53m x 1.65m x 2.4m
- ▶ I-2K Spacecraft Bus
- ▶ Power : 3119 W

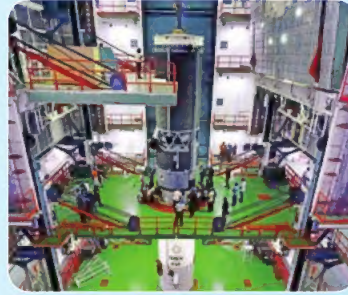
GSLV-F08 Flight Profile



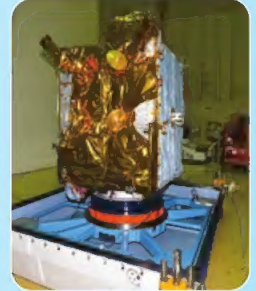
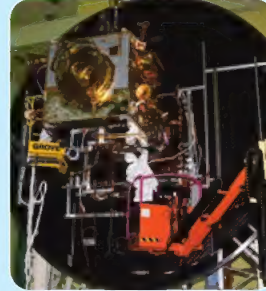
Ground Trace of GSLV-F08 Trajectory

Glimpses of Launch Vehicle and Satellite Integration

GSLV-F08



GSAT-6A



Indian Space Research Organisation

Publications and Public Relations

ISRO Headquarters, Antariksh Bhavan, New BEL Road, Bengaluru - 560 094, India.

www.isro.gov.in